

### Remarks

Claims 1-19 are pending in the application. Claims 1-3, 6, 7, and 10-19 stand rejected as anticipated under 102(e) by U.S. patent ser. no. 6,154,853 to Kedem. Claims 4, 5, 8, and 9 stand further rejected as obvious over Kedem '853 in view of the knowledge of one skilled in the art at the time of the invention.

Claim 1 has been amended to make clear that creating the mirrored subsystem includes incorporating the error correction blocks on the failed drive into the mirrored subsystem. Support for this amendment is provided on page 6, lines 21-27 of the present application.

Kedem creates a mirror of the data in all of the disks of the redundancy group but does not mirror the error correction blocks in the redundancy group. Kedem's method requires more spare disk drives than the single disk drive that is employed in various embodiments of the invention of the subject application. Likewise, Kedem's method of restoring redundancy in the redundancy group may take longer since more data must be recreated in the spare disk drives to restore redundancy.

*see reasoning*  
*16-19*  
*All claims say*  
*is "write redundancy*  
*block to mirrored system"*  
*claim*  
*12-14-15-16-17-18-19*  
*description*

### Claim Rejections --- 35 U.S.C. §102(e)

Claims 1-3, 6, 7, and 10-19 stand rejected as anticipated under 102(e) by U.S. patent ser. no. 6,154,853 to Kedem.

Kedem discloses a RAID storage subsystem that includes parity data, such as a RAID-5 configuration. When a disk in the RAID group begins to fail, the data in the RAID group is converted to a fully mirrored configuration using

spare disk drives, but the error correction data from the RAID group is not mirrored. Once the failed drive has been replaced, the mirrored configuration is converted back to a RAID group and the spare drives return to inactive status. This conversion process includes recreating the error correction data for the RAID group since the mirror does not include such data.

See, generally, fig. 6 and col. 4, lines 48-62 of Kedem '853.

Claim 1 of the present application, as amended, requires creating a mirrored subsystem that includes the failed disk drive slot. The mirror includes the error correction data from the failed disk drive's RAID group. Since Kedem does not teach creating a mirrored subsystem that includes this error correction data, Kedem cannot anticipate claim 1.

← Not in Spec

Claims 2-3, 6, 7, and 10-15 which depend from claim 1 and add further limitations are not anticipated by Kedem for at least the same reasons as for claim 1.

Claim 16 of the present application requires:

“...reconstructing each data block of the failed disk drive in the redundancy group; and  
writing each reconstructed data block to the mirrored subsystem.”

The cited limitations of claim 16 require reconstructing all of the data blocks of the failed disk drive. Therefore, claim 16 requires reconstructing the error correction data blocks of the failed disk drive and writing these blocks to the mirrored subsystem. Since Kedem does not teach reconstructing the error correction data blocks of the failed disk drive and writing these blocks to the

mirrored subsystem, Kedem cannot anticipate claim 16. Claim 17 which depends from claim 16 and adds further limitations is deemed not anticipated by Kedem for at least the same reasons as for claim 16.

Claim 18 of the present application requires:

“logic that reconstructs the data blocks on the failed drive to the mirrored subsystem.”

Since Kedem does not teach reconstructing the error correction data blocks of the failed disk drive to the mirrored subsystem, Kedem cannot anticipate claim 18. Claim 19 which depends from claim 18 and adds further limitations is deemed not anticipated by Kedem for at least the same reasons as for claim 18.

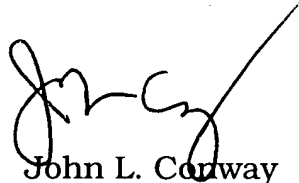
Claim Rejections --- 35 U.S.C. §103(a)

Claims 4, 5, 8, and 9 stand rejected as obvious over Kedem '853 in view of the knowledge of one skilled in the art at the time of the invention.

Claim 4, 5, 8, and 9 depend from claim 1 and add further limitations. The rejection for obviousness relies on Kedem to teach the elements of claim 1 that are incorporated in claims 4, 5, 8, and 9. As stated above, Kedem not does teach elements of claim 1, as amended. Likewise, Kedem cannot teach the elements of claim 1 that are now incorporated in claim 4, 5, 8, and 9. Therefore, claims 4, 5, 8, and 9 are deemed nonobvious over Kedem.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 19-4972. Applicants request reconsideration of the rejected claims and a notice of allowance. The Examiner is requested to telephone the undersigned if any matters remain outstanding so that they may be resolved expeditiously.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'John L. Conway', is written over the printed name.

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